CLAIMS

1. (Previously Presented) A method for providing media defect management, said method comprising the steps of:

defining a user data area on the media by choosing a value for a user area parameter;

defining a user data replacement area on the media by choosing a value for a replacement area parameter, wherein the user data replacement area on the media defined by the value of the replacement area parameter may be null; and

wherein the values chosen for the user area parameter and replacement area parameter determine a particular distributed sparing configuration and thereby defining appropriate defect management.

2. (Original) The method of claim 1, further comprising the step of:

maintaining a defect list including information identifying each independently accessible section of user data replacement area on the media.

3. (Original) The method of claim 2, wherein the step of maintaining the defect list includes the step of:

categorizing the independently accessible sections of the user data replacement area in the defect list to provide information with respect to their use in replacing sections of user data areas of the media.

4. (Original) The method of claim 3, wherein the information provided by the categorizing step includes information with respect to a defective section of the user data area that has not been recorded within a section of the user data replacement area.

5. (Original) The method of claim 3, wherein the information provided by the categorizing step prevents chaining of a section of the user data area to multiple sections of the user data replacement area when a section of the user data replacement area becomes defective.

6. (Previously Presented) The method of claim 1, wherein the values selected for the user area parameter and the replacement area parameter combined define a logical zone such that, if the values selected for the user area parameter and the replacement area parameter are sufficiently small with respect to a total size of the media, a plurality of equal in size zones of user data area and user data replacement area are defined on the media.

7. (Original) The method of claim 6, wherein a physical address of a particular section of the user data area adjusted for the existence of the logical zone from a logical address used to logically identify the particular section of the user data area may be determined through the result of the mathematical expression:

integer (logical address/user area parameter) x (user area parameter + replacement area parameter) + modulo(logical address/user area parameter) + (offset of user data area).

8. (Previously Presented) The method of claim 1, wherein choosing a value for the user area parameter and choosing a value for the replacement area parameter is selected from the group of relationships consisting of:

a sum of the values of the user area parameter and the replacement area parameter is approximately a size of the media;

a sum of twice the value of the user area parameter and the value of the replacement area parameter is approximately a size of the media;

a sum of the values of the user area parameter and the replacement area parameter is approximately ½ a size of the media;

a sum of the values of the user area parameter and the replacement area parameter is selected to be small with respect to a size of the media; and

a sum of the values of the user area parameter and the replacement area parameter is approximately the size of an underlying physical zone.

9. (Previously Presented) The method of claim 1, wherein the user data replacement area associated with the value of the replacement area parameter is disposed on the media at an address prior to a corresponding user data area associated with the value of the user area parameter.

10. (Previously Presented) The method of claim 1, wherein the user data replacement area associated with the value of the replacement area parameter is disposed on the media at an address subsequent to a corresponding user data area associated with the value of the user area parameter.

11. (Previously Presented) The method of claim 9, wherein a sum of the values of the user area parameter and the replacement area parameter is selected to be greater than a size of the media to accommodate selection of a desired value of the replacement area parameter.

12. (Original) The method of claim 1, further comprising the step of:

establishing a logical address hierarchy providing logical addressing for physical addresses of sections of the user data area and sections of the user data replacement area, wherein the logical address hierarchy omits physical addresses of sections of data areas determined to be defective, and wherein omission of physical addresses of sections of data areas determined to be defective affects logical addresses of all subsequent sections of data areas on the media.

13. (Original) The method of claim 12, wherein the step of establishing a logical address hierarchy comprises the step of:

generating a defect list including information identifying the sections of the data areas determined to be defective and omitted from the logical address hierarchy.

14. (Original) The method of claim 12, wherein adjustment of the logical addressing for a particular physical address to omit physical addresses of sections of data areas determined to be defective is accomplished in units equivalent to a single user data area section.

15. (Previously Presented) A system for providing media defect management, said system comprising:

a user area parameter having a value selected to define a user data area on the media; and

a replacement area parameter having a value selected to define a user data replacement data area on the media, wherein the user data replacement area on the media defined by the value selected for the replacement area parameter may be null; and

wherein the values selected for the user area parameter and replacement area parameter determine appropriate defect management for a particular use of the media.

16. (Original) The system of claim 15, further comprising:

means for maintaining a defect list including information identifying each independently accessible section of user replacement data area on the media.

17. (Original) The system of claim 16, wherein the defect list maintaining means includes:

means for categorizing the independently accessible sections of the user data replacement areas in the defect list to provide information with respect to their use in replacing user data areas of the media.

18. (Original) The system of claim 17, wherein the categorizing means includes:

means for providing information with respect to a defective section of the user data area that has not been recorded within a section of the user data replacement area.

19. (Previously Presented) The system of claim 15, wherein the values selected for the user area parameter and the replacement area parameter combined define a logical zone such that, if the values selected for the user area parameter and the replacement area parameter are [selected to be] sufficiently small with respect to a total size of the media, a plurality of equal in size zones of user data area and user data replacement area are defined on the media.

20. (Previously Presented) The system of claim 15, wherein the values of the user area parameter and the replacement area parameter are selectable from the group of relationships consisting of:

a sum of the values of the user area parameter and the replacement area parameter is approximately a size of the media;

a sum of twice the value of the user area parameter and the value of the replacement area parameter is approximately a size of the media;

a sum of the values of the user area parameter and the replacement area parameter is approximately ½ a size of the media;

a sum of the values of the user area parameter and the replacement area parameter is selected to be small with respect to a size of the media; and

a sum of the values of the user area parameter and the replacement area parameter is approximately the size of an underlying physical zone.

21. (Previously Presented) The system of claim 15, wherein the user data replacement area associated with the value of the replacement area parameter is disposed on the media prior to the user data area associated with the value of the user area parameter.

22. (Previously Presented) The system of claim 15, wherein the user data replacement area associated with the value of the replacement area parameter is disposed on the media subsequent to the user data area associated with the value of the user area parameter.

23. (Previously Presented) The system of claim 21, wherein a sum of the values of the user area parameter and the replacement area parameter is selected to be greater than a size of the media to accommodate selection of a desired value of the replacement area parameter.

24. (Original) The system of claim 15, further comprising:

means for establishing a logical address hierarchy providing logical addressing for physical addresses of data areas on the media for use as the user data area associated with the user area parameter and the user data replacement data area associated with the replacement area parameter, wherein the logical address hierarchy omits physical addresses of data areas determined to be defective, and wherein omission of physical addresses of data areas determined to be defective affects logical addresses of all subsequent data areas on the media.

25. – 34. (Canceled)

35. (Previously Presented) A method for providing media defect management for a block addressable bulk storage media, said method comprising the steps of:

establishing a number of blocks of a user data area on the media by choosing a value for a spare interval parameter;

establishing a number of blocks of a user data sparing area on the media by choosing a value for a spare length parameter, wherein the number of blocks of a user data sparing area established by the value of the spare length parameter may be zero;

wherein the chosen values for the spare interval parameter and spare length parameter determine a particular distributed sparing configuration irrespective of physical zones of the media; and

maintaining a list including information identifying each block of the user data sparing area, wherein the list includes information with respect to a status of each block identified.

36. (Original) The method of claim 35, wherein the information with respect to a status of each block includes information with respect to a defective block of the user data area that has not been recorded within a block of the user data replacement area.

37. (Original) The method of claim 36, further comprising the step of:

establishing a logical address hierarchy of the blocks of the media wherein physical addresses of blocks initially determined to be defective are not included in the logical address hierarchy, and wherein all logical addresses corresponding to a physical address subsequent to a block initially determined to be defective are adjusted at least an address space of the block initially determined to be defective.

38. (Previously Added) The system of claim 15, wherein the distributed sparing configuration is determined irrespective of a geometric arrangement of data storage elements due to a physical structure of the media.

39. (Previously Presented) The method of claim 35, wherein the steps of choosing a value for the spare interval parameter and the spare length parameter define appropriate defect management for a particular use of the media.

40. (Previously Presented) The method of claim 1, wherein the steps of choosing a value for the user area parameter and replacement area parameter is performed independent of data segment boundaries on the media arising from geometric characteristics of the media.